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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/737,069

12/15/2003

Seong-Min Choe

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02/08/2006

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EXAMINER

CHANG, DANIEL D

ART UNIT

PAPER NUMBER

2819

DATE MAILED: 02/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/737,069

Applicant(s)

CHOE, SEONG-MIN

Examiner

Daniel D. Chang

Art Unit

2819

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 5 and 12-14 is/are rejected.
- 7) ☒ Claim(s) 3, 4, and 6-11 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 5, and 12-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Kim et al. (US 6,429,679 B1, Kim hereinafter).

Regarding claim 1, Kim discloses, in Fig. 20, an on-DRAM termination resistance control circuit for adjusting a resistance within a semiconductor memory device (it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. Ex parte Masham, 2 USPQ2d 1647 (1987)) that performs an On-DRAM termination operation, comprising:

push-up resistance adjusting means (161, 163) for adjusting resistances of a first (3) and a second (4) inner resistors based an external reference resistor (RQ) to drive a pull-up driver;

pull-down resistance adjusting means (165, 167) for adjusting a resistance of a third inner resistor (8) based on the second inner resistor that is adjusted by the push-up resistance adjusting means to drive a pull-down driver; and

resistance adjustment control means (164, 168) for controlling the operations of the push-up resistance adjusting means and the pull-down resistance adjusting means for a predetermined commanded adjustment time (col. 7, lines 65+).

Regarding claim 2, Kim discloses, in Fig. 20, that the push-up resistance adjusting means (161, 163) includes:

comparing means (161) for comparing the voltage between both ends of the external reference resistor (RQ) that is coupled to the first inner resistor (3) with reference voltage (Vref); and

resistance adjusting means (163) for adjusting the resistances of the first and the second inner resistors depending on the output of the comparing means (161), and

wherein the first and the second inner resistors vary resistances thereof depending on the output of the resistance adjusting means (col. 7, line 50 - col. 8, line 44; col. 13, lines 25+).

Regarding claim 5, Kim discloses, in Fig. 20, that the pull-down resistance adjusting means (165, 167) includes:

comparing means (165) for comparing the voltage between both ends of the third inner resistor (8) that is coupled to the second inner resistor (4) with a reference voltage (Vref); and

resistance adjusting means (167) for adjusting the resistance of the third inner resistor (8) depending on the output of the comparing means (165), and

wherein the third inner resistor (8) varies the resistance thereof depending on the output of the resistance adjusting means (col. 7, line 50 - col. 8, line 44; col. 13, lines 25+).

Method claims 12-14 are essentially the same in scope as apparatus claims 1, 2, and 5 and are rejected similarly.

Allowable Subject Matter

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Claims 3, 4, and 6-11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: the best prior art of record, Kim, taken alone or in combination of other references, does not teach or fairly suggest an on-DRAM termination resistance control circuit comprising, among other things, first and second push-up decoding means for adjusting the first and the second inner resistors by decoding the output of the calculating means, respectively (claim 3); pull-down decoding means for decoding the output of the calculating means to adjust the resistance of the third inner resistor (claim 6); and ring oscillator for outputting a pulse at every cycle while oscillating based on the control signal from the ring oscillator controlling means; and pulse counting and comparing means for counting the pulses from the ring oscillator and comparing the number of the counted pulses with the predetermined commanded adjustment time to confirm equality of both numbers (claim 8), as set forth in the claims.

Response to Arguments

Applicant's arguments filed 12/27/2005 have been fully considered but they are not persuasive.

In response to Applicant's argument that "in Applicant's claimed invention, both the first and the second inner resistors are used for driving a pull-up driver" is not taught by Kim, the limitation of which the Applicant relies (i.e., "the first and the second inner resistors are used for driving a pull-up driver") is not stated in the claims. It is the claims that define the claimed invention, and it is claims, not specifications that are anticipated or unpatentable. *Constant v.*

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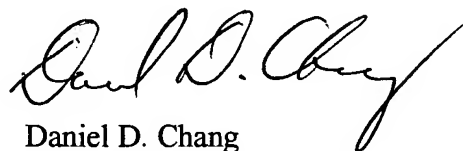
Advanced Micro-Devices Inc., 7 USPQ2d 1064. Moreover, the argument about “the first and the second inner resistors are used for driving a pull-up driver” is neither shown in Applicant’s Drawings nor disclosed in the specification.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel D. Chang whose telephone number is (571) 272-1801. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s acting supervisor, Rexford Barnie can be reached on (571) 272-7492. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Daniel D. Chang
Primary Examiner
Art Unit 2819

dc

**DANIEL CHANG
PRIMARY EXAMINER**